



Bonnie Bergsma
Regulatory Specialist
SAHTU LAND AND WATER BOARD
PO BOX 1
FORT GOOD HOPE NT X0E 0H0

January 3, 2024

Dear Ms. Bergsma:

Submission of 2022-2023 Annual Report for Water Licence S20L8-002

The Government of the Northwest Territories Department of Infrastructure is pleased to submit the attached 2022-2023 Annual Report for Water Licence S20L8-002 for Phase 1 of the Prohibition Creek Access Road. The Annual Report is being provided in accordance with Part B, Condition 17 and responding to the requirements of Schedule 1, Condition 1 of the amended Water Licence issued on June 9, 2023.

Should you have any questions or if you would like further information, please contact myself, Andrew Lirette, Environmental Analyst, via email at Andrew.Lirette@gov.nt.ca or by telephone at (867) 767-9082 ext. 31030. You may also contact Kelly Bourassa, Senior Environmental Analyst, via email at Kelly.Bourassa@gov.nt.ca or by telephone at (867) 767-9082 ext. 31032.

Sincerely,

Andrew Lirette
Environmental Analyst
Infrastructure

Attachment

c. Distribution List

Distribution List:

Trevor Bremner
Regional Superintendent
Environment and Climate Change
Trevor_Bremner@gov.nt.ca

Muktimoy Paul
Senior Project Officer
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Prohibition Creek Access Road – Phase 1
S20L8-002

2022-2023 Annual Water Licence Report

January 2024

2023 Annual Water Licence Report

The Annual Water Licence Report is being provided in accordance with Part B, Condition 17 and responding to the requirements of Schedule 1, Condition 1 of the amended Water Licence issued on June 9, 2023. The reporting period covers October of 2022 to October of 2023. No construction or water withdrawal occurred prior to October 2022.

The information required by Schedule 1, Condition 1 of the amended Water licence are detailed below:

a. A brief summary of project activities

- Construction Contract awarded: October 24, 2022
- Work started: November 22, 2022
- Original completion date: Oct 31, 2023
 - Approximately 95% of overall project work was complete as of October 2023
 - HRN Contracting LTD left the project site on October 25, 2023
 - Completion date has been extended to September 15, 2024
 - HRN Contracting LTD will return to complete the remaining work at the end of May 2024

Prohibition Creek Access Road Phase 1 (Total 6.7 kilometers (km)), Winter 2022/2023 Construction

- Right-of-Way clearing: 35 hectares (ha) cleared from km 0+000 to km 6+700 = 6.7 km.
- Embankment Construction: Construction from km 0+000 to km 6+700 = 6.7 km, approximately 143,000 cubic metres (m³) of minus 300 millimetres (mm) blasted rock placed during the Winter 2022/2023 construction. Seven haul trucks were used.
- Pit development: Approximately 180,000 m³ rock was blasted in the Eddie Lake Quarry.
- Geo-textile: Installed Approximately 125,000 square meters (m²).

Prohibition Creek Access Road Phase 1 (Total 6.7 Km), Summer 2023 Construction

- Embankment construction: Construction from km 0+000 to km 6+700 = 6.70 km, approximately 15,000 m³ in place of minus 300 mm blasted rock placed. Seven haul trucks were used.
- Culvert installation: Total of 30 drainage and 2 structural culverts were installed.
- 20 mm base course surfacing: Construction from km 0+000 to km 3+540 = 3.54 km, approximately 6,000 m³ in place of minus 20 mm placed. Five haul trucks were used.
- Pit development: Approximately 19,000 m³ of 50 mm materials and 29,000 m³ of 20 mm materials were crushed in the Eddie Lake Quarry.
- Delineators: 66 units placed on both sides of roadway from km 0+000 to km 3+300 = 3.3 km. 106 units placed along various curves within the Canyon Creek All-Season Access-Road from km 0+135 to km 12+635 = 12.5 km.
- Francis Creek Bridge: Placed approximately 70 m³ of heavy rock riprap at north abutment. Installed gabion baskets containing approximately 68 m³ of cobble rock fill.
- Helava Creek Bridge: Placed approximately 68 m³ of heavy rock riprap at north abutment. Installed gabion baskets containing approximately 90 m³ of cobble rock fill.

Summary: Prohibition Creek Access Road Phase 1 (Total 6.7 Km), 2022 - 2023 Construction

Embankment Construction: Construction on Prohibition Creek main road from km 0+000 to km 6+700 = 6.70 km, approximately 158,000 m³ of minus 300 mm blasted rock was placed.

- Sub-base materials (minus 50 mm crushed gravel) placed, including culvert installation = 10,000 m³
- Base course materials (minus 20 mm crushed gravel) placed = 10,000 m³
- A total of 32 culverts were installed:
 - 17 - 800 mm diameter
 - 1 - 900 mm diameter
 - 4 - 1000 mm diameter
 - 8 - 1200 mm diameter
 - 2 - 1400 mm diameter

Three temporary culverts were installed during Winter 2023 prior to spring freshet.

Subcontractors from the Sahtu region:

1. Willowlake Env.
2. Sahtu Geomatic
3. Neyo Drilling
4. Tetra Tech
5. End Dump Subcontractors

b. An updated project schedule

The project deadline has been extended to September 15th, 2024. Work scheduled to be completed in Spring/Summer of 2024, commencing the final week of May, will include:

- Placement of 20 mm surfacing materials south of Francis Creek bridge from km 3+540 to km 6+600 = 3.06 km.
- Delineators: 96 units to be placed on both sides of the roadway from km 3+300 to km 6+600 = 3.3 km.
- Installation of guardrails: A culvert located at km 6+319 will have 164 m of guard rail installed on both sides. At Francis Creek Bridge, 176 m of guardrails will be installed on both sides. At Helava Creek Bridge, 153 m of guardrails will be installed on both sides.
- Seeding: Approximately 150 kg will be spread at various locations from km 0+000 to km 6+700 = 6.7 km.
- Coconut matting: Approximately 3,000 m² will be placed at various locations from km 0+000 to km 6+700 = 6.7 km.
- KM Posts: Installation of KM post markers from the start of the Canyon Creek All-Season Access Road (Norman Wells side) to the end of the Prohibition Creek Access Road Phase 1 project limits (Tulita side) at a spacing of 2 km.
- Steam pipes: Steam pipes will be installed for all 32 culverts within this project.

c. The monthly and annual quantities in cubic metres of fresh Water obtained from all sources, as required in Part B, Condition 16 (MEASURE WATER USE AND WASTE DISPOSAL) of this Licence

Water was obtained from authorized sources (Mackenzie River and Canyon Creek) for use in various construction and dust control activities. Please refer to 'Appendix A – Water Withdrawal Dates and Volumes' for a detailed breakdown of water use for this project and identification of how much from the difference sources. Monthly water volumes are summarized below:

- **Annual volume: 5,740 m³**
- December 2022: 280 m³
- January 2023: 336 m³
- June 2023: 364 m³
- July 2023: 560 m³
- August 2023: 1,764 m³
- September 2023: 2,058 m³
- October 2023: 378 m³

All authorized wastes were disposed of following the procedures set out in the approved Waste Management Plan. No unauthorized wastes were created or disposed of.

d. A summary of the calibration and status of the meters and devices referred to in Part B, Condition 16 (MEASURED WATER USE AND WASTE DISPOSAL) of this Licence

Water withdrawal volumes were measured on a load count basis. The number of daily loads were tracked using a load sheet and multiplied by the water truck tank capacity of 14 m³. The pump type was a 3" Boy pump with a screen mesh size of 2.54 mm. The flow rate for extraction and withdrawal was 10 L/s. Refer to 'Appendix A - Water Withdrawal Dates and Volumes' for a summary of these daily extraction volumes.

e. A summary of engagement activities conducted in accordance with the approved Engagement Plan, referred to in Part B, Condition 18 of this Licence;

Engagement was required this past year (continuing from the year prior) to apply for a Water Licence amendment. The amendment has since been approved and allows the withdrawal of water from five additional sources intersecting the Prohibition Creek Access Road (Canyon Creek, Francis Creek, Helava Creek, Christina Creek, and Prohibition Creek) during periods of sufficient flow.

The main purpose of this amendment was to reduce the long hauls from the Mackenzie River each time water is needed for construction. Additional activities allowed under the amendment include the installation and equalization of drainage channel culverts at select watercourse crossings within the Right-of-Way, the modification of the bank or bed of a watercourse by infilling, and the construction, operation, and reclamation of temporary support infrastructure.

The engagement details of this Water Licence amendment are as follows:

Engagement

July 14, 2022

Prior to the amendment application, a letter was sent via email to all Affected Parties. This letter detailed the purpose of the proposed amendment and invited Parties to reach out with any questions or concerns. The following Organizations were notified:

- Behdzi Ahda' First Nation
- Sahtu Secretariat Incorporated
- Délıne Got'ıne Government
- Fort Good Hope Métis Nation Local #54 Land Corporation
- Tulita Land Corporation
- Yamoga Land Corporation
- Ayoni Keh Land Corporation
- Tulita Dene Band
- Sahtu Dene Council
- Norman Wells Land Corporation
- Fort Good Hope (Kasho Got'ıne) Dene Band
- Fort Norman Métis Community
- Tulita District Land Corporation

No questions or concerns were received.

March 9, 2023

A follow-up letter was sent out to the above Organizations to remind them of the upcoming amendment application. This allowed another opportunity to raise questions or concerns. No questions or concerns were received.

March 24, 2023

The Water Licence amendment application was submitted to the Sahtu Land and Water Board.

News Releases

November 22, 2022

GNWT announced that the construction on Prohibition Creek Access Road Phase 1 had begun.

https://www.gov.nt.ca/sites/flagship/files/documents/pcar_phase_1_construction_begins_en.pdf

f. A summary of how Traditional Knowledge was incorporated into decision making

As evidenced by the completion of the Traditional Knowledge studies included as part of the Regulatory Application for the project, Traditional Knowledge has been incorporated into the Prohibition Creek Access Road throughout the planning, design, and construction phases of the project.

Clearing of land has occurred within the predetermined Right-of-Way, which was heavily influenced by Traditional Knowledge through the identification of known and potential archaeological sites. Results from Traditional Knowledge studies have confirmed that maintaining the health of streams that the Prohibition Creek Access Road Right-of-Way intersects is crucial as several locals use these waterbodies for fishing and as a source of drinking water. During construction of Prohibition Creek Access Road Phase 1, additional work was required at the Francis and Helava Creek Bridges. Significant measures (guided by the Department of Fisheries and Oceans) were implemented to ensure that no further sedimentation occurred, fish timing windows were respected, and that active fish passage was maintained.

g. A summary of activities conducted in accordance with the approved Spill Contingency Plan, referred to in Part H, Condition 2 of this Licence, including:

- 1. A list and description for all Spills and Unauthorized Releases, including the date, NWT spill number, volume, location, summary of the circumstances and follow-up actions taken, and status (i.e., open or closed), in accordance with the reporting requirements in Part H, Condition 3 of this Licence; and**

N/A

- 2. An outline of any spill training carried out.**

The approved Spill Contingency Plan was reviewed by all employees prior to commencing work. Daily toolbox meetings and regular weekly meetings were held where spill prevention, containment, and clean up methods were discussed.

h. A summary of any Progressive Reclamation or Final closure work completed

N/A

i. A list of any non-compliance(s) with the conditions of this Licence or any directive from the Board pursuant to the conditions of this Licence

All work was conducted in compliance with the conditions of the Prohibition Creek Access Road Water Licence #S20L8-002 and all directives received from the Board.

j. A summary of actions taken to address concerns, non-conformances, or deficiencies in any reports filed by an inspector

No inspections of Water Licence S20L8-002 were completed in the past year.

Four inspections of Land Use Permit S20E-005 (tied to Water Licence S20L8-002) were completed by GNWT-ECC in the past year. No non-compliances were identified during these inspections. Regular communication between the Inspector and project staff has helped ensure that all conditions of the Land Use Permit were, and will continue to be, adhered to.

On June 9, 2023, INF was notified by a GNWT-ECC Inspector of concerns related to planned work to install Gabion Baskets at Francis and Helava Creek. Dialogue and additional correspondence with the Department of Fisheries and Oceans and GNWT-ECC occurred to resolve these concerns, and on June 13, 2023, the GNWT-ECC Inspector wrote an authorization letter for the work to take place.

No unauthorized discharges occurred during the 2023 reporting period.

___ *Muktimoy Paul* _____
Muktimoy Paul, P. Eng
Senior Project Officer
Department of Infrastructure
Surface Design and Construction

Appendix A - Water Withdrawal Dates and Volumes

Date	Water Source	# of Loads	Total m ³
December 15, 2022	Mackenzie River	5	70
December 16, 2022	Mackenzie River	10	140
December 17, 2022	Mackenzie River	5	70
Sub Total, December		20	280
January 16, 2023	Mackenzie River	9	126
January 17, 2023	Mackenzie River	9	126
January 18, 2023	Mackenzie River	6	84
Sub Total, January		24	336
No water withdrawal Feb, March, April and May, 2023		0	0
June 1, 2023	Mackenzie River	1	14
June 2, 2023	Mackenzie River	1	14
June 3, 2023	No water withdrawal	0	0
June 4, 2023	Mackenzie River	1	14
June 5, 2023	Mackenzie River	1	14
June 6, 2023	No water withdrawal	0	0
June 7, 2023	Mackenzie River	1	14
June 8, 2023	Mackenzie River	1	14
June 9, 2023	Mackenzie River	1	14
June 10, 2023	Mackenzie River	1	14
June 11, 2023	Mackenzie River	1	14
June 12, 2023	Canyon Creek	1	14
June 13, 2023	Canyon Creek	1	14
June 14, 2023	Canyon Creek	1	14
June 15, 2023	Canyon Creek	1	14
June 16, 2023	Canyon Creek	1	14
June 17, 2023	Canyon Creek	1	14
June 18, 2023	Canyon Creek	1	14
June 19, 2023	Canyon Creek	1	14
June 20, 2023	No water withdrawal	0	0
June 21, 2023	Canyon Creek	1	14
June 22, 2023	Canyon Creek	1	14
June 23, 2023	Canyon Creek	1	14
June 24, 2023	Canyon Creek	1	14
June 25, 2023	No water withdrawal	0	0

Date	Water Source	# of Loads	Total m ³
June 26, 2023	Canyon Creek	1	14
June 27, 2023	Canyon Creek	1	14
June 28, 2023	Canyon Creek	1	14
June 29, 2023	Canyon Creek	1	14
June 30, 2023	Canyon Creek	1	14
Sub Total, June		26	364
July 1, 2023	Canyon Creek	1	14
July 2, 2023	Canyon Creek	1	14
July 3, 2023	No water withdrawal	0	0
July 4, 2023	Mackenzie River	4	56
July 5, 2023	Canyon Creek	1	14
July 6, 2023	No water withdrawal	0	0
July 7, 2023	Canyon Creek	1	14
July 8, 2023	Mackenzie River	4	56
July 9, 2023	No water withdrawal	0	0
July 10, 2023	Canyon Creek	1	14
July 11, 2023	Canyon Creek	1	14
July 12, 2023	Canyon Creek	1	14
July 13, 2023	Canyon Creek	1	14
July 14, 2023	Canyon Creek	1	14
July 15, 2023	Canyon Creek	1	14
July 16, 2023	Mackenzie River	2	28
July 17, 2023	Canyon Creek	1	14
July 18, 2023	Canyon Creek	1	14
July 19, 2023	Canyon Creek	1	14
July 20, 2023	Canyon Creek	1	14
July 21, 2023	Mackenzie River	4	56
July 22, 2023	Canyon Creek	1	14
July 23, 2023	Canyon Creek	1	14
July 24, 2023	Canyon Creek	1	14
July 25, 2023	Canyon Creek	1	14
July 26, 2023	No water withdrawal	0	0
July 27, 2023	Mackenzie River	4	56
July 28, 2023	Canyon Creek	1	14
July 29, 2023	Canyon Creek	1	14
July 30, 2023	Canyon Creek	1	14
July 31, 2023	Canyon Creek	1	14
Sub Total, July		40	560

Date	Water Source	# of Loads	Total m ³
August 1, 2023	Mackenzie River	9	126
August 2, 2023	Mackenzie River	8	112
August 3, 2023	Mackenzie River	10	140
August 4, 2023	Mackenzie River	10	140
August 5, 2023	Mackenzie River	6	84
August 6, 2023	Mackenzie River	4	56
August 7, 2023	Mackenzie River	7	98
August 8, 2023	Canyon Creek	1	14
August 9, 2023	Mackenzie River	11	154
August 10, 2023	Mackenzie River	12	168
August 11, 2023	Canyon Creek	1	14
August 12, 2023	Mackenzie River	12	168
August 13, 2023	Mackenzie River	12	168
August 14, 2023	Canyon Creek	1	14
August 15, 2023	Canyon Creek	1	14
August 16, 2023	No water withdrawal	0	0
August 17, 2023	Mackenzie River	2	28
August 18, 2023	Canyon Creek	1	14
August 19, 2023	Canyon Creek	1	14
August 20, 2023	No water withdrawal	0	0
August 21, 2023	Canyon Creek	1	14
August 22, 2023	Canyon Creek	1	14
August 23, 2023	Canyon Creek	1	14
August 24, 2023	Mackenzie River	8	112
August 25, 2023	Canyon Creek	1	14
August 26, 2023	Canyon Creek	1	14
August 27, 2023	Canyon Creek	1	14
August 28, 2023	No water withdrawal	0	0
August 29, 2023	Canyon Creek	1	14
August 30, 2023	Canyon Creek	1	14
August 31, 2023	Canyon Creek	1	14
Sub Total, August		126	1764
September 1, 2023	Canyon Creek	1	14
September 2, 2023	Canyon Creek	1	14
September 3, 2023	Mackenzie River	4	56
September 4, 2023	Mackenzie River	3	42
September 5, 2023	Mackenzie River	3	42
September 6, 2023	Mackenzie River	4	56

Date	Water Source	# of Loads	Total m ³
September 7, 2023	Mackenzie River	8	112
September 8, 2023	Mackenzie River	4	56
September 9, 2023	Mackenzie River	6	84
September 10, 2023	Mackenzie River	4	56
September 11, 2023	Mackenzie River	9	126
September 12, 2023	Mackenzie River	5	70
September 13, 2023	Mackenzie River	6	84
September 14, 2023	Mackenzie River	7	98
September 15, 2023	Mackenzie River	6	84
September 16, 2023	Mackenzie River	9	126
September 17, 2023	Mackenzie River	8	112
September 18, 2023	Mackenzie River	4	56
September 19, 2023	Mackenzie River	4	56
September 20, 2023	Mackenzie River	4	56
September 21, 2023	Mackenzie River	3	42
September 22, 2023	Mackenzie River	3	42
September 23, 2023	No water withdrawal	0	0
September 24, 2023	Mackenzie River	7	98
September 25, 2023	Mackenzie River	7	98
September 26, 2023	Mackenzie River	6	84
September 27, 2023	Mackenzie River	6	84
September 28, 2023	Mackenzie River	5	70
September 29, 2023	Mackenzie River	5	70
September 30, 2023	Mackenzie River	5	70
Sub Total, September		147	2058
October 1, 2023	Mackenzie River	6	84
October 2, 2023	Mackenzie River	6	84
October 3, 2023	Mackenzie River	7	98
October 4, 2023	Mackenzie River	4	56
October 6, 2023	Mackenzie River	3	42
October 7, 2023	Canyon Creek	1	14
Sub Total, October		27	378
Monthly Totals		# of loads	Total m³
December 2022		20	280
January 2023		24	336

Date	Water Source	# of Loads	Total m³
No water withdrawal Feb, March, April and May, 2023		0	0
June 2023		26	364
July 2023		40	560
August 2023		126	1764
September 2023		147	2058
October 2023		27	378
Total		410	5740